



UNITED STATES PATENT AND TRADEMARK OFFICE

JK

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,315	06/18/2001	Shinichi Hayashi	FUJI 18.659	4585

26304 7590 04/21/2005  
KATTEN MUCHIN ZAVIS ROSENMAN  
575 MADISON AVENUE  
NEW YORK, NY 10022-2585

EXAMINER

SHINGLES, KRISTIE D

ART UNIT PAPER NUMBER

2141

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/885,315	<b>Applicant(s)</b> HAYASHI ET AL.	
	<b>Examiner</b> Kristie Shingles	<b>Art Unit</b> 2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 29 December 2004.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-19 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 29 December 2004 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:
1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

*Applicant has not amended any claims. Claims 1-19 are still pending.*

### *Drawings*

1. The proposed drawing corrections filed 12/29/2004 have been accepted by the Examiner. The corrections to the drawings will not be held in abeyance.

### *Specification*

2. The proposed specification corrections filed 12/29/2004 have been accepted by the Examiner. The corrections to the specification will not be held in abeyance.

### *Response to Arguments*

3. Applicant's arguments filed 12/29/2004 have been fully considered but they are not persuasive in reference to the cited prior art, *Rochberger* (USPN 5,940,396). Thus, the rejection to claims 1-19 is sustained and rendered below.

A. **Regarding Claims 1, 9 and 19** (which are independent claims and substantially equivalent to each other), as stated in Applicants' Remarks, "In sharp contrast to Applicants' claimed method, Rochberger's method requires load balancing to be performed by each node along the route. Applicants' claimed invention requires load balancing to be performed in each of a plurality of areas of the network comprising multiple nodes." The Examiner's response follows below.

Art Unit: 2141

It is the Examiner's position that *Rochberger* teaches the limitation of independent claims 1, 9, and 19 of "...carrying out a load-balancing process in said each area separately," by permitting the nodes in each branch of the nodal tree to conduct load balancing for the respective area between the other connected nodes. As indicated in Figure 2 of *Rochberger*, each root node includes a plurality of branched nodes wherein each branched cooresponds to an area wherein load balancing in performed among the branches connected to that particular node (col.6 lines 29-60). Furthermore, *Rochberger* discloses the capability of the networked nodes to perform "load balancing or load sharing among nodes" (col.11 lines 6-8), wherein load-sharing consequently implies reducing the processing workload among the nodes via equal distribution of the processing tasks among the nodes.

B. Regarding other arguments cited by the Applicants, such as, "Applicants' invention may enable a reduction in processing workload, for example, by performing load balancing for each closed area at only one node located on or near the boundary of an area". Examiner responds below.

It is noted that the feature and/or limitation upon which the applicants rely is not recited in the rejected claims. The "...closed area at only one node located on or near the boundary of an area" is not stated in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Claimed subject matter, not the specification, is the measure of the invention. See *In re Van Geuns*, 988 F.2d 1181, 26 SPQ2d 1057 (Fed. Cir. 1993).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims **1-6, 9-13, 16 and 19** are rejected under 35 U.S.C. 102(b) as being anticipated by *Rochberger* (USPN 5,940,396).

a. Per claim **1**, *Rochberger* teaches a traffic engineering method of a network divided into a plurality of areas, each area including a plurality of nodes, said method comprising the step of carrying out a load-balancing process in said each area separately (col.3 line 50-col.4 line 45; system allows for plurality of nodes whereas each node performs load-balancing at each point).

b. Claims **9** and **19** contain limitations substantially equivalent to claim **1**, and are therefore rejected under the same basis.

c. Per claim **2**, *Rochberger* teaches the traffic engineering method as claimed in claim **1**, further comprising the step of deciding a destination of a packet in said each area (Abstract and col.3 lines 61-66; routing method determines destination for each packet).

d. Per claim **3**, *Rochberger* teaches the traffic engineering method as claimed in claim **1**, further comprising the steps of: calculating a normalized value used for the load-balancing process, based on address information of the packet supplied to an ingress node of the network from an outside of the network; adding said normalized value to switching information of said packet; and forwarding said packet from said ingress node to the plurality of nodes (col.7

Art Unit: 2141

line 41-col.9 line 12; each node is assigned a specific significant length associated to address prefix which is used for forwarding the packet from a source node to a destination node of the network).

e. Claim 10 contains limitations substantially equivalent to claim 3, and is therefore rejected under the same basis.

f. Per claim 4, *Rochberger* teaches the traffic engineering method as claimed in claim 3, further comprising the steps of: receiving said packet from said ingress node at an area boundary node located on a boundary of the plurality of areas; and extracting said normalized value used for carrying out the load-balancing process in an area including said area boundary node, from the switching information of said packet (col.8 lines 7-63 and col.11 lines 7-21; upon communication between user nodes and network nodes, load-balancing is performed based on the match length of the packet—thus the match length is extracted and used for grouping in the array).

g. Claim 11 contains limitations substantially equivalent to claim 4, and is therefore rejected under the same basis.

h. Per claim 5, *Rochberger* teaches the traffic engineering method as claimed in claim 1, further comprising the step of notifying a closest node apparatus that carries out the load-balancing process and is the closest to said node apparatus on an upstream side of said node apparatus, about a failure if detecting the failure (col.11 lines 7-38; crankback process allows for distribution of notifications of nodal failure in a round-robin fashion).

i. Claim 12 contains limitations substantially equivalent to claim 5, and is therefore rejected under the same basis.

Art Unit: 2141

j. Per claim 6, *Rochberger* teaches the traffic engineering method as claimed in claim 4, further comprising the step of redistributing a traffic flow from a failed route to a route other than the failed route if receiving a failure notification at said ingress node or said area boundary node (Abstract, Fig. 7 and col. 11 lines 24-66; redistribution of traffic flow from a failed route to a different route is implied in the crankback process once it is determined that a packet has reached a dead-end and the node receives the Release message).

k. Claims 13 and 16 contain limitations substantially equivalent to claim 6, and are therefore rejected under the same basis.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 8, 14, 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rochberger* in view of *Katzela et al* (USPN 5,872,773).

a. Per claim 7, *Rochberger* teaches the traffic engineering method of claim 6 as applied above, yet fails to distinctly teach the traffic engineering method as claimed in claim 6, further comprising the step of deciding whether a traffic loss occurs by redistributing the traffic flow from said failed route to the route other than said failed route if receiving the failure notification at said ingress node or said area boundary node. However, *Katzela et al* teach the

Art Unit: 2141

redistribution and re-routing of traffic flow if a link/route fails or congestion is present (Abstract, col.5 lines 28-43 and col.10 lines 7-28).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings *Rochberger* and *Katzela et al* to provide for redistribution of packet flow due to traffic loss for the purpose of maintaining the viability of the network and the recoverability of data flow from a failed route. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

b. Claims **14** and **17** contain limitations substantially equivalent to claim 7, and are therefore rejected under the same basis.

c. Per claim **8**, *Katzela et al* teach the traffic engineering method as claimed in claim 7, further comprising the steps of: setting a new route, if said failure-notification receiving unit decides that the traffic loss occurs by redistributing the traffic flow from said failed route to the route other than said failed route; and switching the traffic flow from said failed route to the new route (col.10 lines 7-56 and col.11 line 38-col.12 line 17; a new route is set to redirect traffic from the failed route).

d. Claims **15** and **18** contain limitations substantially equivalent to claim 8, and are therefore rejected under the same basis.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



Art Unit: 2141

- a. *Berthaud et al* (USPN 6,011,776) disclose dynamic bandwidth estimation and adaptation in high speed packet switching networks.
- b. *Rochberger et al* (USPN 6,147,971) disclose an optimized routing method based on minimal hop count for use in PNNI based ATM networks.
- c. *Hlender* (USPN 5,727,051) discloses a system and method for adaptive routing on a virtual path broadband network.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2141

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Kristie Shingles*  
Examiner  
Art Unit 2141

kds

  
RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER